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# New Species of the Genera Lispinus and Neolosus (Staphylinidae: Osoriinae) from the Neotropics 

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#### Abstract

Examination of collections of staphylinid beetles from the neotropics has revealed 11 new species of Lispinus and Neolosus. Eight of these are from South America, two are from Central America, and one from the West Indies. Keys are provided for the identification of species in two groups of Lispinus and for one group of Neolosus.


Key words: Rove beetles; Staphylinidae; Osoriinae; Lispinus; Neolosus; neotropics.

## INTRODUCTION

As part of my studies on neotropical Osoriinae, I discovered ten new species of Lispinus and one of Neolosus in the extensive collections in three institutions. The purpose of this paper is to provide descriptions and illustrations of
these new species. These descriptions complement my earlier revisions of Lispinus (Irmler, 1994) and Neolosus (Irmler, 1999). The following descriptions of the new species are arranged alphabetically by specific names within the genera.

## Acknowledgments

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lections of Insects, Arachnids and Nematods, Ottawa, Dr. A. Smetana and Dr. A. Davies (CNC), and, in particular, the Natural History Museum and Biodiversity Research Center of the University of Kansas, Lawrence, Kansas, Dr. J. S. Ashe (SEMC).

## METHODS

All measurements were made using a ocular micrometer. Total body length was determined by summing the individual lengths of the tagmata. Measurements of the tagmata were performed as follows: headlength along the midline between font margin and neck; width between the eyes including eyes. Pronotum.-
length along the midline; width at the widest part. Elytra.-length from shoulder to posterior angle; width in the middle.

Abbreviations for collections containing the specimens used in this study are given in the acknowledgments. My own collection is abbreviated UIC.

## TAXONOMY

## Lispinus ashei new species <br> (Figs. 5a-f)

Holotype.-Honduras: Ocotepeque: 24 km E. Ocotepeque, El Guisayote, 14. VI. 1994, $2170 \mathrm{~m}, 14^{\circ} 25^{\prime} \mathrm{N}, 89^{\circ} 04^{\prime}$ W; J. S. Ashe and R. Brooks collectors; male, under bark (SEMC).

Paratypes.-Two males and two females (SEMC), one male and one female (UlC), all with same data as the holotype

Diagnosis.-The species is similar to the slightly larger Lispinus cordilliensis in microsculpture and punctuation of pronotum and elytra, and the antennae. The endophallus of the aedeagus has fewer coils than in L. cordilliensis and the paramera seems to lack the lateral membranous lobe. Apically, the spermatheca is without a straight part and has only one torsion. The species also resembles L. fungicola in the nature of the aedeagus and spermatheca, but $L$. ashei is larger.

Description.-Length: 5.2 mm . Color: Black; last abdominal tergite reddish; legs and antennae red. Head: 0.6 mm long, 0.8 mm wide; distinctly and densely punctuate; distance between punctures shorter than diameters of punctures; surface with sparse micropunctulation; two setae between anterior edge of eyes inserted in small round depressions; surface shiny, with weak microsculpture transversely reticulate apically, longitudinally reticulate laterally and on neck. Antemmae: Antennomere 3 scarcely longer than 2,4 th antennomere slightly longer than wide, 5 th quadrate, antennomeres $6-10$ scarcely wider than long. Pronotum: 0.7 mm long, 0.9 mm wide; midline wide, smooth, with indistinct transverse depression in front of posterior edge; depressions at posterior angles distinct, not sharply delimited from lateral margin and disc; lateral sides of pronotum curved, slightly emarginate in front of posterior angles; surface of pronotum shiny, with punctuation deeper and about as dense as that on head, with sparse micropunctulation and with microsculpture similar to that on head, but slightly denser. Elytra: 1.1 mm long, 1.0 mm
wide; punctuation equally deep but sparser than that on pronotum; punctures indistinctly longitudinal; each elytron with indistinct coriaceous row of punctures; surface of elytra slightly less shiny than that of pronotum; microsculpture longitudinally reticulate, denser and deeper than that on pronotum. Abdomen: densely punctuate with transversely reticulate microsculpture.

Etymology.-The species is dedicated to Dr. J. S. Ashe, who collected it during one of his numerous excursions to the neotropics.

## Lispinus beni new species

(Figs. 4a-f)
Holotype.-Bolivia: Beni: Beni Station, Palm camp, NE of San Borja, 3. August 1988, male, under bark, BlOLATSI / MAB, larvae in EtOH collection (SEMC)

Paratypes.-Bolivia: Beni: Six males, five females (SEMC), one male, one female (UIC), all with data same as the holotype

Diagnosis.-The species is similar to Lispinus listenbarthi in size, punctuation, and microsculpture. The endophallus of the aedeagus is more simple and the sclerotized part of the ductus of the spermatheca is much shorter and straight. The species belongs to the group of L. tardus Sharp (1887) that is characterized by a bilobed paramera with a sclerotized outer lobe and a thin transparent inner lobe. The pronotum of the species in this group is more or less straightly narrowed from the front angles to the posterior angles.

Description.-Length: 4.0 mm . Color: Black; posterior margin of abdominal tergites reddish; antennae piceous; legs red. Head: 0.5 mm long, 0.6 mm wide; distinctly, and sparsely punctuate; distance between punctures greater than diameters of punctures; surface of clypeus with transverse reticulate microsculpture; surface of disc slightly shiny, with netlike microsculpture on disc, longitudinally reticulate laterally; two large punctures with setae in indistinct depressions between eyes. Antennac: Antennomere


Figs. 1-3. 1.-Lispinus lescheni, 2:-Lispinus wentralis, 3:-Lispinus malliformis; a : front body, b : microsculpture and punctuation of pronotum, c : microsculpture and punctuation of elytra, d: antenna, e: aedeagus in lateral and dorsal view, f: paramera, g: spermatheca (line a: 1 num , $\mathrm{b}-\mathrm{g}$ : 0.1 mm ).

3 scarcely longer than 2; Antennomeres 4-6 quadrate; Antennomeres 7-10 slightly wider than long. Pronotum: 0.6 mm long, 0.75 mm wide, with smooth midline; depressions at posterior angles not deep; pronotum widest in the anterior half, curved in middle, straightly narrowed from middle to posterior angles; punctulation sparse; distance between punctures greater than diameters of punctures; micropunctulation sparse; punctulation sparser on moderately wide space between posterior depression and midline than on anterior half of disc; posterior depressions sparsely punctuate; surface of pronotum moderately shiny, with microsculpture longitudinally reticulate or longitudinally undulate. Elytra: 0.8 mm long, 0.9 mm wide; each with sparse and weak punctuation; surface shiny, with sparse micropunctulation; microsculpture weak, longitudinally reticulate. Abdomen: Punctuation of abdominal tergites sparse, distinct, sparser posteriorly than at base; posterior margin of tergites shiny, microsculpture transversely reticulate, weaker at posterior margin of tergites than at base.

Etymology.-The specific name beni is a noun in apposition for the Bolivian province where the species was collected.

## Lispinus fungicola new species

(Figs. 6a-f)
Holotype.-Peru: Madre de Dios: Cusco Amazónico, Provincia de Tambopata, 15 km NE Puerto Maldonado, 18 July 1989, elevation 200 m, J. S. Ashe \& R. Leschen *555, male, collected from encrusting fungi (SEMC).

Paratypes.-Two females (SEMC) and one male (UIC) with same data as holotype; Perv: Huánuco:, Panguana, Biological Station, $74^{\circ} 56^{\prime}$ W, $9^{\circ} 37^{\prime} \mathrm{S}$, 21 January 1975, female, collected by Hanagarth (UIC).

Diagnosis.-The species resembles Lispinus venezuelanus and L. listenbarthi, but punctuation of pronotum and elytra of L. fungicola is sparser and the microsculpture is more longitudinally reticulate. The aedeagus of L. fungicola is similar to that of L. listenbarthi; however, the spermatheca is totally different. Furthermore the pronotal sides are curved in L. fungicola. It is also similar to the larger L. ashei.

Description.-Length: 4.2 mm . Color: Black; abdominal tergites reddish at posterior edge; antennae and legs red. Head: 0.5 mm long, 0.7 mm wide; distinctly, but not densely, punctuate; distance between punctures as great as, or greater than, diameters of punctures; clypeus with dense transversely reticulate microsculpture; surface of disc moderately shiny; microsculpture more longitudinally reticulate; two setae in indistinct depressions between anterior edges of eyes. Antennae: Antennomere 3 longer than 2; Antennomeres 4-6 quadrate; Antennomeres 7-9 distinctly wider than long; Antennomere 10 longer than
preceeding antennomeres. Pronotum: 0.65 mm long, 0.85 mm wide, with smooth midline; depressions at posterior edge distinct, but not delimited from lateral margin; lateral sides curved in anterior part, in front of posterior angles scarcely narrowed; surface with distinct but sparse punctuation; distance between punctures greater than diameters of punctures; micropunctulation sparse; surface scarcely shiny, with microsculpture longitudinally reticulate. Elytra: 0.9 mm long, 0.9 mm wide; punctuation as on pronotum; punctures slightly longitudinal; surface shiny, with the longitudinally reticulate microsculpture slightly deeper than that on pronotum. Abdomen: distinctly and densely punctuate, punctuation sparser at posterior edge of tergites than at base; microsculpture transversely reticulate.

Etymology.-The specific name is derived from the Latin fungus and cola meaning living in fungi.

## Lispinus jannaicensis new species <br> (Figs. 7a-f)

Holotype.-Jamaica: St. Andrew Parish, Parque Hardwar Gap, elevation $4009 \mathrm{ft}(1237 \mathrm{~m}), 76^{\circ} 42^{\prime} \mathrm{W}, 18^{\circ} 04^{\prime}$ N, 16 December 1973, male, under bark, collected by. S. and J. Peck (CNC).

Paratypes.- Three males and five females (CNC), one male and one female (UIC) with same data as holotype.

Diagnosis.-The species is similar to Lispinus fungicola in the structure of the spermatheca and microreticulation of the elytra. It is conspicuously different by the absence of the two deep punctures on the disc of the head and endophallus of the aedeagus with more coils. It also resembles the larger $L$. ashei, but the spermatheca has fewer coils, and the paramera is wider with a small transparent lateral appendix.

Description.-Length: 4.6 mm . Color: Black, legs piceous. Head: 0.5 mm long, 0.65 mm wide; punctuation of head distinct; punctuation on clypeus denser than that on disc; distance between punctures as great as, or greater than, diameters of punctures; surface shiny, with distinct microsculpture transversely reticulate on the clypeus, longitudinally reticulate laterally and netlike reticulate on disc; coriaceous netlike reticulation laterally behind eyes. Antenmae: Antennomere 3 distinctly longer than 2; Antennomeres 4-5 quadrate; last antennomeres wider than long. Pronotum: 0.6 mm long, 0.8 mm wide, with small smooth midline in posterior half; lateral sides widest at anterior edge, scarcely narrowed to the posterior angles, slightly emarginate in the posterior third, with several setae along the lateral margin; depressions at posterior angles deep, distinct; surface moderately shiny, densely and distinctly punctuate; punctures deeper than on head; distance mostly not greater than diameters of punctures; microsculpture longitudinally reticulate; surface of poste-


Figs. 4-6. 4.-Lispinus beni, 5.-Lispinus ashei, 6. -Lispinus fungicola; a: front body, b: microsculpture and punctuation of pronotum, c: microsculpture and punctuation of elytra, $d$ : antenna, e: aedeagus in lateral and dorsal view, f: paramera, $g$ : spermatheca (line a, $\mathrm{d}: 1 \mathrm{~mm} ; \mathrm{b}, \mathrm{c}, \mathrm{e}-\mathrm{g}$ : 0.1 mm ).
rior depressions coriaceously punctuate and with netlike microsculpture. Elytra: 0.95 mm long, 1.0 mm wide, with longitudinal punctures; punctuation less deep and sparser than on the pronotum; surface dull, with microsculpture dense and distinct, more distinct than on pronotum; each elytron with one deeper puncture with seta in the anterior third of disc. Abdomen: Punctuation weak, sparser than on pronotum; punctuation on abdominal tergites 1-4 denser than that on tergites 5 and 6; microsculpture netlike at base of abdominal tergites and partly transversely reticulate at posterior edge.

Etymology.-The specific name is derived from the island of Jamaica where the species was collected.

## Lispimus lescheni new species <br> (Figs. la-f)

Holotype.-Perv: Madre de Dios: Cusco Amazónico, Provincia de Tambopata, 15 km NE Puerto Maldonado, 9 July 1989, elevation 200 m , J. S. Ashe and R. Leschen, \# 454 , male, collected from fungus (Schizopora) (SEMC).

Paratypes.- Two females (SEMC) and one male (UIC) with same data as the holotype.

Diagnosis.-This species is totally different from all other known neotropical Lispinus by having transverse reticulation on the elytra and abdominal depressions. The transverse reticulate microsculpture of the elytra is similar to that in neotropical Neolosus; however, I could not find the hypomeron line of the pronotum characteristic of Neolosus.

Description.-Length: 3.8 mm . Color: Piceous; last abdominal segments with reddish tint; antennae and legs red. Head: 0.5 mm long, 0.7 mm wide; densely and finely punctuate; distance between punctures greater than diameters of punctures; surface sparsely micropunctuate; microsculpture weak, transversely reticulate apically, longitudinally reticulate posteriorly; surface shiny, nearly polished; two setae between anterior edges of eyes in indistinct, round depressions. Antennae: Antennomere 3 distinctly longer than 2; Antennomeres 4 and 5 longer than wide, Antennomere 6 quadrate; Antennomeres 7-10 slightly wider than long,. Pronotum: 0.55 mm long, 0.85 mm wide; depressions at posterior angles distinct, clearly delimited from disc and uniformly curved lateral margin, distinctly less punctuate than head; distance between punctures greater than diameters of punctures; sparsely micropunctuate except for smooth midline; microsculpture weak, consisting of longitudinal undulations; surface shiny. Elytra: 0.8 mm long, 0.85 mm wide; punctuation as on pronotum; microsculpture weak, transversely reticulate at base, more netlike reticulation at posterior edge; surface shiny, nearly polished. Abdomen: finely punctuate; microsculpture transversely reticulate; abdominal tergites with distinct transverse depression in middle of base.

Etymology.-The species is dedicated to Richard Leschen who, with J. S. Ashe, collected this species.

## Lispinus malliformis new species

(Figs. 3a-f)
Holotype.-Brazil: Ceará: with the following labels: "Museum Paris, Brésil, Etat de Ceara, Env. de Baturité, leg. A. Michelin, 1906", a second label: "dans Manihot glazcoyi." Male (IRSN).

Diagnosis.-This species resembles Lispinus bolivianus (identified by A. Fauvel as L. boliviainus) by having long, deep, and dull depression on the posterior angles of the pronotum, but it is much longer than L. boliviamus. Particularly the form of the aedeagus characterizes the species. The aedeagus of $L$. malliformis is unique among neotropical Lispinus; the upper part has a wide bridge that is nearly twice as wide as the diameter of the aedeagus.

Description.-Length: 4.1 mm . Color: Black; elytra dark piceous; posterior margin of 5th and 6th abdominal segment reddish; antennae brown. Head: 0.5 mm long, 0.6 mm wide, distinctly and densely punctuate; fine micropunctulation between the coarse punctures; distance between punctures greater than diameters of punctures; surface shiny, with weak microsculpture, transversely reticulate on the front head, longitudinally reticulate on the posterior head; dense coriaceous microreticulation behind eyes; two round, relatively deep, distinct depressions between eyes. Antennac: Antennomere 2 round; Antennomere 3 conical; Antennomeres 4-6 quadrate. Pronotum: 0.5 mm long, 0.7 mm wide; lateral sides nearly parallel, slightly narrowed from anterior angels to posterior angles, distinctly emarginate in front of posterior angles; depressions at the posterior angles deep and long, much longer than half the length of pronotum; outer margin of depressions distinct, sharply delimited from lateral margin; punctuation more distinct and denser than that on head, with nearly coriaceous punctures near the posterior margin; surface shiny, with moderately dense microsculpture longitudinally reticulate; depressions at posterior angles with distinct microreticulation; surface of depressions dull. Elytra: 0.8 mm long, 0.7 mm wide; punctuation finer and sparser than on the pronotum; distance between punctures greater than diameters of punctures; each elytron with two rows of deep longitudinal punctures between shoulders and posterior margin, not forming longitudinal depression; microsculpture dense, distinct, longitudinally reticulate; indistinct transverse depression behind mesonotum. Abdomen: Distinctly punctuate; punctures at lateral sides deeper and denser than on disc, with more or less distinct longitudinal transverse ridges laterally; surface moderately shiny, with netlike microsculpture; lateral sides with long yellow hairs; particularly at base of abdominal segments with a transverse row of yellow hairs.


Figs. 7-9. 7.-Lispinus jamaicensis, 8.-Lispinus sobrinullus, 9.-Lispinus pseudosobrinus; a: front body, b: microsculpture and punctuation of pronotum, c: microsculpture and punctuation of elytra, $d$ : antenna, e: aedeagus in lateral and dorsal view, f: paramera, g: spermatheca (line a, d: 1 mm; b, c. e-g: 0.1 mm ).

Etymology.-The specific epithet is a combination meaning "formed like a hammer" (malleus = hammer) referring to the specific structure of the aedeagus.

## Lispinus pseudosobrinus new species

(Figs. 9a-f)
Holotype.-Venezuela: Mérida: Tabay, 7 km E La Mucuy Station, Sierra Nevada National Park, elevation $2300-2700 \mathrm{~m}, 8^{\circ} 37^{\prime} 44^{\prime \prime} \mathrm{N}, 71^{\circ} 29^{\prime} 26^{\prime \prime} \mathrm{W}, 24$ May 1998, collected by. J. S. Ashe, R. Brooks, and R. Hanley, VEN1ABH98 110, male, under bark (SEMC)

Paratypes.-Five males and five females (SEMC, UIC) with same data as the holotype; Venezuela: Mérida: 42.4 km NW Mérida, near La Carbonera, elevation 2360 m , $8^{\circ} 37^{\prime} 38^{\prime \prime}$ N, $74^{\circ} 21^{\prime} 10^{\prime \prime}$ W, 22 May 1998, collected by J. S. Ashe, R. Brooks, and R. Hanley, VEN1ABH98 095, two males and five females, under bark (SEMC, UIC); Mérida: 18.5 km NE Mérida, elevation $2950 \mathrm{~m}, 8^{\circ} 44^{\prime} 34^{\prime \prime} \mathrm{N}, 71^{\circ} 3^{\prime} 44^{\prime \prime}$ W, 25 May 1998, collected by R. Anderson, VEN1A98 038, one male and one female, under dead leaves (SEMC, UlC); Táchira: San Cristobal, 10 km SE Parque National Chorro El Indio, elevation $1370 \mathrm{~m}, 7^{\circ} 44^{\prime} 3^{\prime \prime} \mathrm{N}, 72^{\circ} 13^{\prime} 1^{\prime \prime} \mathrm{W}, 30$ May 1998, collected by J. S. Ashe, R. Brooks, R. Hanley, VEN1ABH98 164, one male and two females, under bark (SEMC).

Diagnosis.-This species resembles Lispinus sobrinus in microsculpture and distal part of endophallus of aedeagus. As in the related species, L. sobrinus and $L$. sobrinullus, the endophallus of the aedeagus distally contain a funnel-like structure. However, L. psendosobrimus is much smaller than $L$. sobrinus, and the endophallus of the aedeagus has many more coils than $L$. sobrinus and $L$. sobrinullus.

Description.-Length: 5.4 mm . Color: Black; legs yellow; antennae piceous; last abdominal tergite reddish. Head: 0.6 mm long, 0.9 mm wide; front margin evenly emarginate in the middle; punctuation distinct; distance between punctures about as great as diameters of punctures; the usual setae at the apical and lateral margin; two setae between eyes in indistinct depressions; surface shiny, with weak microsculpture transversely reticulate. Antentae: Antennomere 3 scarcely longer than 2; Antennomeres 4-6 quadrate; subsequent antennomeres scarcely wider than long. Pronotum: 0.75 mm long, 1.0 mm wide; widest in the middle; lateral sides nearly parallel in the apical half and scarcely narrowed to front angles, emarginate in the basal half, with deep depressions at posterior angles; punctuation distinct; distance between punctures as great as, or greater than, diameters of punctures, with indistinct smooth midline; punctuation near posterior edge slightly deeper and denser than that on disc; surface with scattered micropunctures; surface shiny, with weak microsculpture longitudinally reticulate; surface of posterior depressions moderately shiny, with denser microsculpture than that
on disc. Elytra: 1.1. mm long, 1.1 mm wide; punctuation much sparser and weaker than that on pronotum; surface scarcely shiny; microsculpture netlike reticulate, more distinct than that on pronotum; two setae on disc and several setae on lateral side. Abdomen: Segments distinctly and densely punctuate at base, sparser punctuation on posterior edge of abdominal tergites.

Etymology.-The suffix pseudo-meaning similar refers to the similarity to L. sobrinus Fauvel, 1865, that was collected near Caracas, Venezuela.

Remarks.-A key to the related species, Lispimus pseudosobrimus, L. sobrinus, and L. sobrimullus is provided after the description of $L$. sobrinullus.

## Lispinus quadrisetus new species <br> (Figs. 10a-f)

Holotype.-Costa Rica: San José: Zurqui de Moravia, elevation $1600 \mathrm{~m}, 10^{\circ} 3^{\prime} 0^{\prime \prime} \mathrm{N}, 84^{\circ} 1^{\prime} 0^{\prime \prime} \mathrm{W}, 1-30$ March 1996, collected by. P. Hanson, CR1 H95-96 04, male in a flight intercept trap (SEMC).

Paratype.-One male with same data as the holotype (UIC).

Diagnosis.-This species resembles Lispinus strictus by the row of four setae on the elytra, but L. quadrisetus is slightly longer and the punctuation of the elytra is slightly finer and sparser than in L. strictus. Furthermore, the endophatlus of the aedeagus is totally different; there is only one large coil of the unusual broad endophallus in $L$. quadrisetus.

Description.-Lengtli: 5.4 mm , Color: Black; antennae piceous; legs yellow; last abdominal tergite reddish. Head: 0.7 mm long, 0.8 mm wide; punctuation distinct, moderately dense, average distance between punctures greater than diameters of punctures; microsculpture dense and distinct, transversely reticulate on clypeus, netlike reticulation on disc; the usual setae along front and lateral margin, relatively long; distance between interocular setae greater than between each seta and eye; one or two shorter setae between posterior supraocular seta and the long neck seta. Antenluae: Antennomere 3 scarcely longer than 2; Antennomeres 4-6 quadrate; subsequent antennomeres slightly wider than long. Pronotum: 0.75 mm long, 0.9 mm wide, widest in anterior half, scarcely narrowed to front angles, but narrowed straightly to posterior angles; depressions at posterior angles distinct, with several long yellow setae along front and lateral margin and a long apical seta at posterior depressions; punctuation on disc as deep as, but sparser than, that on head; distance between punctures conspicuously greater than diameters of punctures; surface slightly shiny, with microsculpture fine, dense, longitudinally reticulate; punctuation and microsculpture of depressions as that on disc. Elytra: 1.05 mm long, 1.0 mm wide; punctuation as that on pronotum; surface of elytra less shiny than that on pronotum, with microsculpture


Figs. 10-11. 10-Lispinus quadrisetus, 11.-Neolosus cochabambae; a: front body, b: microsculpture and punctuation of pronotum, c: microsculpture and punctuation of elytra, d: antenna, e: aedeagus in lateral and dorsal view, f: paramera, g: spermatheca (line a, d: $1 \mathrm{~mm} ; \mathrm{b}, \mathrm{c}, \mathrm{e}-\mathrm{g}: 0.1 \mathrm{~mm}$ ).
slightly more distinct than on pronotum; microsculpture netlike reticulate; in addition to usual lateral setae at lateral margin, on each elytron a row of four setae on disc and two more setae at posterior edge and one seta behind apical swpression. Abdomen: Coarsely punctuate, with distinct strigae on lateral side and numerous setae on base and on lateral part of each abdominal tergite.

Etymology.-The specific name is derived from quadrimeaning four and seta meaning hair and refers to the row of four hairs on each elytron.

## Key to Species of Lispinus with a Row of Setae on each Elytron

1. Larger species, 5.8 mm long; pronotum deeply emar-
ginate in front of posterior angles; each elytron with a row of large, coriaceous, deep punctures containing a row of three setae $\qquad$ L. minox Smaller species, $5.0-5.4 \mathrm{~mm}$ long; pronotum less emarginate in front of posterior angles, without a row of deep, coriaceous punctures on each elytron. $\qquad$ 2
2. Two small punctures with short setae behind the posterior supraocular puncture at the neck; a row of five setae on each elytron (including the usual seta at the apical depression) $\qquad$ L. quadrisetus One small puncture with short setae between the posterior supraocular puncture and the large puncture at the neck; a row of four setae on each elytron (including the usual seta at the apical depression) $\qquad$ L. strictus

## Lispinus sobrinullus new species <br> (Figs. 8a-f)

Holotype--Venezuela: Aragua: 12 km N Maracay, $10^{\circ} 24^{\prime} \mathrm{N}, 67^{\circ} 29^{\prime} \mathrm{W}, 7$ May 1995 , elevation 1290 m , collected by Robert W. Brooks \#056, male, under bark (SEMC).

Paratype.-One female with same data as the holotype (UIC).

Diagnosis.-This species is similar to Lispinus sobrimus in the structure of the aedeagus. It contains the same apical funnel-like structure and nearly the same torsion structure of the endophallus. However, L. sobrinullus is much smaller than L. sobrimus; the microsculpture of the elytra is much deeper and more longitudinally reticulate. Furthermore, microsculpture on the pronotum is weaker and on the elytra deeper in $L$. sobrinuillus than in $L$. sobrinus.

Description.-Lengtl: 5.4 mm . Color: Black; antennae piceous; legs yellow; last abdominal tergite reddish. Head: 0.6 mm long, 0.8 mm wide; punctuation deep, moderately dense, with distance between punctures about as great as diameters of punctures; with micropunctulation; surface shiny, with weak microsculpture transversely undulate; with the usual setae along front margin, two setae between eyes and one seta between eyes and neck. Antenmae: Antennomere 3 scarcely longer than 2; Antennomeres 4-6 quadrate; subsequent antennomeres slightly wider than long, Pronotum: 0.75 mm long, 0.9 mm wide, widest near front angles; lateral sides more or less parallel in anterior half, distinctly narrowed in posterior half; sides not emarginate in front of posterior angles; punctuation deep, dense, denser at front angles and in front of posterior edge than on disc; midline indistinct, smooth; punctuation sparser at both sides of midline; surface shiny, with weak microsculpture longitudinally undulate; with scattered micropunctulation; microsculpture along posterior edge and within posterior depressions more distinct. Elytra: 1.1 mm long, 1.05 mm wide; punctuation nearly as deep and only slightly sparser than that on pronotum, moderately coriaceous near lateral sides; microsculpture longitudinally reticulate, much more distinct and deeper than that on pronotum and head. Abdomen: Coarsely punctuate on basal part of anterior tergites; sparser and finer punctuation on posterior edge of tergites.

Etymology.-The specific name sobrinullus is the diminutive of sobrinus and refers to the similarity to $L$. sobrinus Fauvel, 1865.

Remarks.-The three species of the Lispinus sobrinus group from Venezuela can be differentiated in the following key. The main character of the group is the tube or funnel-like structure of the apical endophallus of the aedeagus. The spermatheca is simple without a long ductus.

## Key to the Species of the Lisinus sobrinus Group

1. Larger species, $6.0-6.3 \mathrm{~mm}$ long; punctuation on pronotum finer than on elytra $\qquad$ L. sobrinus Smaller species, $5.2-5.3 \mathrm{~mm}$ long; punctuation on elytra as fine as, or finer than, that on pronotum 2
2. Punctuation on pronotum deep; distance between punctures as great as, or shorter than, their diameters $\qquad$ L. sobrimullus Punctuation on elytra and pronotum weak; distance between punctures much greater than diameters of punctures on pronotum L. pseudosobrinus

## Lispinus ventralis new species

(Figs. 2a-f)
Holotype.-Bolivia: Yuracaris, male (IRSN)
Paratype.-One male with the same label as the holotype (IRSN).

Diagnosis.-This species is similar to Lispinus canalis in length, punctuation, and microsculpture. It differs from L. canalis by the form of the pronotum, the anterior one third of which is curved to the front angles, whereas it is straightly narrowed from the front angles to the posterior angles in L. canalis. The most conspicuous character is the wide paramera of the aedeagus and the thick antennae.

Description.-Length: 5.2 mm . Color: Black; antennae piceous; legs rufotestaceous; posterior margin of pronotum red; elytra piceous; posterior margin of abdominal tergites red; last abdominal tergite light red. Head: 0.6 mm long, 0.8 mm wide, distinctly and densely punctuate; distance between punctures about as great as diameters of punctures; surface shiny, with weak microsculpture transversely reticulate; on each side of the middle between the eyes with a round depression with a moderately long hair; distance between depressions about twice as great as the distance to the eye. Antennac: Thick; Antennomere 2 short, slightly wider than long; Antennomeres 4 and 5 quadrate; subsequent antennomeres wider than long; Antennomeres 710 twice as wide as long. Pronotum: 0.8 mm long, 0.95 mm wide; lateral sides curved in anterior one third to anterior angles, straightly narrowed in posterior half, scarcely emarginate in front of posterior angles; smooth midline about three-fourths as long as pronotum, not reaching front margin; disc with distinct punctuation; punctures deeper than those on head, particularly on each side of the midline; punctuation moderately dense, with distance between punctures more or less similar to that on the head, but less dense at lateral sides and inner part of posterior depressions; a more coriaceous punctuation on posterior depressions; surface moderately dull; microsculpture longitudinally reticulate, dense, more distinct than on the head.

Elytra: 0.95 mm long, 1.05 mm wide; punctuation much weaker and sparser than that on pronotum; surface dull, with microsculpture longitudinally reticulate, netlike reticulation on the anterior one third; microsculpture more distinct and denser than that on pronotum; indistinct depression lateral to suture behind mesonotum. Abdomen: Densely and coarsely punctuate; surface moderately shiny, with weak microsculpture; yellow hairs relatively short.

Etymology.-The species was labelled (but not published) as Lispinus ventralis by C. Fauvel; I have used the same name, which is derived from the Latin venter, meaning abdomen and possibly refers to the coarsely punctuate abdomen.

Remarks.-I could not find Yuracaris. A village named Yura is located in the Departamento de La Paz at $66^{\circ} 21^{\prime} \mathrm{W}$, $19^{\circ} 42^{\prime} \mathrm{S}$, but I am unsure if it is the same as Yuracaris.

## Neolosus cochabambae new species

(Figs. 11a-f)
Holotype.-Bolivia: Cochabamba: 16.7 km W Villa Tunari, Parque Machias, elevation $300 \mathrm{~m}, 16^{\circ} 58^{\prime} 20^{\prime \prime} \mathrm{S}$, $65^{\circ}$ $24^{\prime} 42^{\prime \prime}$ W, 12 February 1999, collected by R. Anderson, BOL 1A99037, male, in lowland rain forest (SEMC).

Paratype.-Three females (SEMC), and one male and two females (UIC) with same data as the holotype.

Diagnosis.-This species can scarcely be differentiated from the related species of the Neolosus zischkai group by external characters. Only the structure of the aedeagus is characteristic in having an asymmetrical middle lobe. The species of the $N$. zischkai group are characterized by smooth elytra with a row of only two setae on the disc, whereas the species of the $N$. trichidus group are characterized by two rows with at least four setae each (Irmler 1999).

Description.-Length: 6.2 mm . Color: Black. Head: 0.6 mm long, 0.8 mm wide, with fine, sparse punctuation; distance between punctures much greater than diameters of punctures; surface shiny, with microsculpture transversely reticulate; two supraocular setae; two more setae behind posterior supraocular seta; eyes as long as temples. Antennae: Antennomere 3 scarcely longer than 2; Antennomere 4 globular; Antennomere 5 quadrate; subsequent antennomeres slightly wider than long. Pronotum: 0.75 mm long, 1.1 mm wide, widest shortly behind anterior angles; lateral sides scarcely narrowed to posterior angles; front edge deeply emarginate; front angles distinctly prominent; depressions at posterior angles deep, reaching the middle; several setae along lateral margin; punctuation as fine and sparse as that on head; midline short, smooth; surface shiny, with microsculpture more or less longitudinally reticulate on anterior half, transversely reticulate on posterior half. Elytra: 1.15 mm long, 1.25 mm wide; punctuation finer and sparser than that on pronotum; surface shiny, with microsculpture transversely reticulate; large puncture with seta near posterior third of disc. Abdomen: Distinct diagonal strigae at lateral sides; only a moderately wide space on middle of tergites smooth; microsculpture transversely reticulate.

Etymology.-The specific name refers to the Bolivian Departamento de Cochabamba.

## Key to the Species of the Neolosus zischkal Group

1. Middle lobe of aedeagus asymmetrical with strong ridge at outer side ending in a hook-like structure $\qquad$ N. chochabambae

Middle lobe of aedeagus symmetrical 2
2. Middle lobe at apex obtuse with a ridge ..... N. obscurus Middle lobe at apex acute ............................. N. zischkai

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